

EXHIBIT 6

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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA**

CIVIL ACTION NO. 3:20-CV-06754

**GOOGLE LLC,
v.
SONOS, INC.**

EXPERT REPORT OF JAMES E. MALACKOWSKI

November 30, 2022



6.3 The '966 Patent

The '966 Patent, entitled "Zone Scene Management" is assigned to Sonos, Inc.¹⁰¹ The application that resulted in the issuance of the '966 Patent was filed on April 12, 2019, which itself is a continuation of application number 15/130,919, filed on April 15, 2016, which is a continuation of application number 14/465,457, filed on August 21, 2014 (now U.S. Patent No. 9,344,206), which is a continuation of application number 13/896,829, filed on May 17, 2013 (now U.S. Patent No. 8,843,228), which is a continuation of application number 11/853,790, filed on September 11, 2007 (now U.S. Patent No. 8,483,853), which claims priority to provisional application number 60/825,407, filed on September 12, 2006.¹⁰² I understand that Sonos has alleged infringement of claims 1-2, 4, 6, 8-10, 12, 14, and 16.¹⁰³

The '966 Patent specification issued on November 5, 2019 and expires on or around September 11, 2027.¹⁰⁴ The abstract of the '966 Patent reads as follows:

*An example computing device in a media playback system receives a first request to create a first zone scene including a first preconfigured grouping of zones including a first zone and a second zone, and based on the first request, causes creation and storage of the first zone scene. The computing device receives a second request to create a second zone scene including a second preconfigured grouping of zones including the first zone and a third zone, and based on the second request, causes creation and storage of the second zone scene. While displaying a representation of the first zone scene and a representation of the second zone scene, the computing devices receives a third request to invoke the first zone scene, and based on the third request, causes the first zone scene to be invoked such that the first zone and the second zone become configured for synchronous playback of media.*¹⁰⁵

I understand that the '966 Patent is related to and shares a common specification with the '885 Patent. The difference between the two, as I understand, is that the '885 Patent covers Sonos's zone scene technology from the perspective of a media player (*i.e.*, a speaker) while the '966 Patent covers Sonos's zone scene technology from the perspective of a computing device (*i.e.*, a controller).¹⁰⁶

7. INDUSTRY BACKGROUND

7.1 Home Audio Player Market

Major players in the home audio industry include: Sonos, Google, Bose, Samsung, Denon, Sony, Harman/Kardon, Bang & Olufsen, and LG.¹⁰⁷ Audio player products offered by these companies are

¹⁰¹ U.S. Patent No. 10,469,966, p. 1.

¹⁰² U.S. Patent No. 10,469,966, pp. 1-2.

¹⁰³ Opening Almeroth Report, p. 8.

¹⁰⁴ "US10469996," *Google Patents*, <https://patents.google.com/patent/US10469966B2/en?q=10469966>.

¹⁰⁵ U.S. Patent No. 10,469,966, p. 1.

¹⁰⁶ Opening Almeroth Report, pp. 39-40.

¹⁰⁷ SONOS-SVG2-00063586-589.



12.2.3 Direct Control Quantitative Indicator Conclusion

Based upon the reasonable royalty indicators calculated above, I believe the appropriate starting point for the *Georgia-Pacific* analysis is \$1.38, based upon the incremental YouTube advertising and subscription revenue royalty quantitative indicator.⁴⁷⁶

12.2.4 Zone Scene Reasonable Royalty Indicator

As described above, Google does not earn substantial income on the sales of the '885 Accused Instrumentalities themselves, but instead relies on the functionality to increase the number of users and amount of time those users are interacting with the Google ecosystem in an effort to generate additional advertising revenue. Therefore, I have considered an approach under which Sonos, as the technology developer, would charge Google a fee to implement this technology into its products.

I have investigated the offerings of a third-party company, If This Then That ("IFTTT") which provides similar, albeit less valuable, functionality as Sonos's patented Zone Scene technology.

12.2.4.1 IFTTT Background

IFTTT is a web-based service that allows its users to create sequential chains of simple conditional statements, comprised of "if" statements ("triggers"), which check for a condition, and "then" statements ("actions"), which act upon a service based upon the returned value of the trigger.⁴⁷⁷ For example, IFTTT offers pre-made applets that allow a consumer to integrate across applications, devices, and services to perform functions such as: determining the temperature of your home using the current weather conditions, activating a security system upon leaving home, and voice-activation of a device.⁴⁷⁸

I understand that Dr. Almeroth has reviewed IFTTT and provided input regarding its technical comparability to the claimed technology in the '885 Patent:

I have been asked to review the "Applets" provided by "IFTTT" to determine whether they are technologically comparable to the claimed technology of the '885 and '966 Patents. According to the IFTTT website, "IFTTT is short for If This Then That, and is the best way to integrate apps, devices, and services." To provide such integration, IFTTT offers "Applets" that have "a combination of triggers and actions that can be combined to create the automations that help you achieve your goals, be more efficient, and improve your smart home." For example, a first IFTTT Applet can be programmed and saved with routines or actions, which are executed with the press of a first button, to play music on multiple smart speakers in a home. Similarly, a second Applet can be programmed and saved with routines or actions, which are executed with the press of a second button, to play music on at least one of the speakers in the first Applet together with at least one different speaker (not included in the first Applet) in the same home.

⁴⁷⁶ \$1.38 = \$1.12 royalty rate for advertising revenue + \$0.26 royalty rate for subscription revenue.

⁴⁷⁷ "IFTTT – Trust, Ownership, Control and Business Model," *Mere Civilian*, <https://www.merecivilian.com/ifttt/#:~:text=IFTTT%20has%20stated%20that%20there%20are%20over%20200%2C000,expensive%20tiers%20and%20any%20revenue%20from%20IFTTT%20partners.>

⁴⁷⁸ "WTF is IFTTT?" *IFTTT*, https://ifttt.com/explore/new_to_ifttt.



In this regard, the IFTTT Applets are technologically comparable to the “zone scene” technology claimed in the ’885 and ’966 Patents. That is, these Applets can be used to create and save a predefined group of playback devices, such as speakers, that can later be invoked to cause such devices to playback the same song. These saved groups can also be named according to a common theme, such as “Garden,” “Morning,” “Afternoon,” and “Evening.” Moreover, the Applets allow for these predefined groups to include overlapping playback devices and to be capable of playing back the same song.

It should be understood, however, that the IFTTT Applets do not perform each and every limitation of the claims of the ’885 and ’966 Patents and do not provide the full scope of advantages explained above. As one non-limiting example, these Applets do not enable the creation of groups of speakers that are “configured for synchronous playback of media” when invoked, as required by limitations 1.6 and 1.7 of claim 1 of the ’885 Patent and limitations 1.5 and 1.7 of claim 1 of the ’966 Patent. As such, unlike the ’885 and ’966 Patents’ claimed technology, the smart speaker groups created via these IFTTT Applets do not provide the advantage of synchronous audio playback because the smart speakers in a group created and invoked with an IFTTT Applet would have unwanted echo (e.g., echo caused by clock drift between the smart speakers and/or echo caused by differences in the playback start time of the audio on each smart speaker).

Nevertheless, it is my opinion that, while the technology incorporated into the IFTTT Applets may be inferior to the claimed technology of the ’885 and ’966 Patents, the IFTTT Applets are technologically comparable to the claimed “zone scene” technology of the ’885 and ’966 Patents.⁴⁷⁹

I understand that while asserted claim 1 is directed to and infringed by a single “zone player” with certain functional capability, the claim recites three separate “zone players” (e.g., speakers), two separate groups or zone scenes, and one common or overlapping “zone player” at a minimum.⁴⁸⁰

To help with building an applet, IFTTT offers pre-made triggers and actions. One such pre-made trigger is the “Button press,” which can prompt numerous workflows and automations, as shown in the figure below.⁴⁸¹

⁴⁷⁹ Opening Almeroth Report, pp. 385-386, 396. Internal cites omitted.

⁴⁸⁰ Opening Almeroth Report, pp. 259-260.

⁴⁸¹ Opening Almeroth Report, pp. 386-387.



save each applet.⁵¹² To activate the IFTTT applets, the user simply activates the “Button press” trigger (which can be saved, for example, as a widget on an iPhone home screen), which then implements one of the three methods listed above, causing a group of speakers to play a song. In other words, *if* the “Button press” trigger is activated, *then* the relevant Sonos or Spotify actions are executed, resulting in a group of speakers playing a song.⁵¹³

As such, IFTTT provides for a portion of the zone scene functionality contemplated by the Asserted Claims of the ’885 Patent and ’966 Patent. Specifically, the actions described above allow an IFTTT user to program, name, save, and then activate a first group of speakers for music playback, as well as program, name, save, and activate a second group of speakers for music playback, where there is at least one overlapping speaker between the first speaker group and second speaker group. The speakers in each group can also be set up to play the same song. However, I understand IFTTT is unable to enable the entire functionality contemplated in the Asserted Claims of the ’885 Patent and ’966 Patent. For example, music that is played through a speaker group via an IFTTT applet is not synced.

The “Pro” subscription is the cheapest plan that allows users to create two multi-action applets, thereby replicating the functionality of zone scene technology. Given that, I have assumed that the “Pro” subscription fee would be an appropriate starting point for determining what Sonos would charge Google as a per-device royalty for each of the Zone Scene Patents.

Around the time of the hypothetical negotiation for the ’885 Patent, in November 2020, the “Pro” subscription cost \$3.99 per month, or \$11.97 per quarter. In September 2020, a few months before the hypothetical negotiation, users were given the option of selecting their own subscription fee, as long as it was at least \$1.99 per month. I understand this was the first instance in which IFTTT users were asked to pay for the services provided by IFTTT applets.⁵¹⁴ In order to be conservative, I have provided a range of “Pro” subscription fees as a starting point including the lowest fee IFTTT offered of \$1.99 per month (\$5.97 per quarter) as a low price and the next lowest offered price, which was \$3.99 per month (\$11.97 per quarter), as a high price.

Around the time of the hypothetical negotiation for the ’966 Patent, in November 2019, the “Pro” subscription was provided at no cost to IFTTT users. As stated above, IFTTT users were first asked to pay for IFTTT services for the first time in September 2020, with the option to subscribe to the “Pro” plan for as little as \$1.99 per month. I believe that the parties would understand that IFTTT would not be able to offer its services for free indefinitely, and the initial prices offered would be known or knowable at the time of the hypothetical negotiation for the ’966 Patent. In order to be conservative, I use \$1.99 per month, the lowest IFTTT “Pro” plan price offered as a starting point to my reasonable royalty analysis for the ’966 Patent; this results in \$5.97 per quarter.

⁵¹² SONOS-SVG2-00227592; SONOS-SVG2-00227584-585.

⁵¹³ Opening Almeroth Report, pp. 386-394.

⁵¹⁴ “IFTTT.com Plans,” *Wayback Machine*, <https://web.archive.org/web/20200930053720/https://ifttt.com/plans>; Hearn, P., “IFTTT Pricing: Is Pro Worth The Cost?” *Online Tech Tips*, <https://www.online-tech-tips.com/software-reviews/ifttt-pricing-is-pro-worth-the-cost/>.